MPGFYEIVIKVPSDLDEHLPGISDSFVNWVAEKEWELPPDSDMDLNLIEQAPLTVAEK
LQRDFLTEWRRVSKAPEALFFVQFEKGESYFHMHVLVETTGVKSMVLGRFLSQIREK
LIQRIYRGIEPTLPNWFAVTKTRNGAGGGNKVVDECYIPNYLLPKTQPELQWAWTNM
EQYLSACLNLTERKRLVAQHLTHVSQTQEQNKENQNPNSDAPVIRSKTSARYMELVG
WLVDKGITSEKQWIQEDQASYISFNAASNSRSQIKAALDNAGKIMSLTKTAPDYLVG
QQPVEDISSNRIYKILELNGYDPQYAASVFLGWATKKFGKRNTIWLFGPATTGKTNIA
EAIAHTVPFYGCVNWTNENFPFNDCVDKMVIWWEEGKMTAKVVESAKAILGGSKVR
VDQKCKSSAQIDPTPVIVTSNTNMCAVIDGNSTTFEHQQPLQDRMFKFELTRRLDHDF
GKVTKQEVKDFFRWAKDHVVEVEHEFYVKKGGAKKRPAPSDADISEPKRVRESVAQ
PSTSDAEASINYADRYQNKCSRHVGMNLMLFPCRQCERMNQNSNICFTHGQKDCLEC
FPVSESQPVSVVKKAYQKLCYIHHIMGKVPDACTACDLVNVDLDDCIFEQZ

FIGURE 1

atgccggggttttacgagattgtgattaaggtccccagcgaccttgacgagcatctgcccggcatttctgacagctttgtgaactgggtgg
ccgagaaggaatgggagttgccgccagattctgacatggatctgaatctgattgagcaggcacccctgaccgtggccgagaagctgca
gcgcgactttctgacggaatggcgccgtgtgagtaaggccccggaggccctttctttgtgcaatttgagaagggagagagctacttcca
catgcacgtgctcgtggaaaccaccggggtgaaatccatggttttgggacgtttcctgagtcagattcgcgaaaaactgattcagagaatt
taccgcgggatcgagccgactttgccaaactggttcgcggtcacaaagaccagaaatggcgccggaggcgggaacaaggtggtgga
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ttgaatctcacggagcgtaaacggttggtggcgcagcatctgacgcacgtgtcgcagacgcaggagcagaacaaagagaatcagaat
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cggatttataaaattttggaactaaacgggtacgatccccaatatgcggcttccgtctttctgggatgggccacgaaaaagttcggcaaga
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FIGURE 2

MPGFYEIVIKVPSDLDGHLPGISDSFVNWVAEKEWELPPDSDMDLNLIEQAPLTVAEK
LQRDFLTEWRRVSKAPEALFFVQFEKGESYFHMHVLVETTGVKSMVLGRFLSQIREK
LIQRIYRGIEPTLPNWFAVTKTRNGAGGGNKVVDECYIPNYLLPKTQPELQWAWTNM
EQYLSACLNLTERKRLVAQHLTHVSQTQEQNKENQNPNSDAPVIRSKTSARYMELVG
WLVDKGITSEKQWIQEDQASYISFNAASNSRSQIKAALDNAGKIMSLTKTAPDYLVG
QQPVEDISSNRIYKILELNGYDPQYAASVFLGWATKKFGKRNTIWLFGPATTGKTNIA
EAIAHTVPFYGCVNWTNENFPFNDCVDKMVIWWEEGKMTAKVVESAKAILGGSKVR
VDQKCKSSAQIDPTPVIVTSNTNMCAVIDGNSTTFEHQQPLQDRMFKFELTRRLDHDF
GKVTKQEVKDFFRWAKDHVVEVEHEFYVKKGGAKKRPAPSDADISEPKRVRESVAQ
PSTSDAEASINYADRYQNKCSRHVGMNLMLFPCRQCERMNQNSNICFTHGQKDCLEC
FPVSESQPVSVVKKAYQKLCYIHHIMGKVPDACTACDLVNVDLDDCIFEQ

FIGURE 3

atgccggggttttacgagattgtgattaaggtccccagcgaccttgacgagcatctgcccggcatttctgacagctttgtgaactgggtgg
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gcgcgactttctgacggaatggcgccgtgtgagtaaggccccggaggccctttttctttgtgcaatttgagaagggagagagctacttcca
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FIGURE 4

MPGFYEIVLKVPSDLDEHLPGISDSFVSWVAEKEWELPPDSDMDLNLIEQAPLTVAEK
LQREFLVEWRRVSKAPEALFFVQFEKGDSYFHLHILVETVGVKSMVVGRYVSQIKEK
LVTRIYRGVEPQLPNWFAVTKTRNGAGGGNKVVDDCYIPNYLLPKTQPELQWAWTN
MDQYISACLNLAERKRLVAQHLTHVSQTQEQNKENQNPNSDAPVIRSKTSARYMELV
GWLVDRGITSEKQWIQEDQASYISFNAASNSRSQIKAALDNASKIMSLTKTAPDYLVG
QNPPEDISSNRIYRILEMNGYDPQYAASVFLGWAQKKFGKRNTIWLFGPATTGKTNIA
EAIAHAVPFYGCVNWTNENFPFNDCVDKMVIWWEEGKMTAKVVESAKAILGGSKV
RVDQKCKSSAQIDPTPVIVTSNTNMCAVIDGNSTTFEHQQPLQDRMFKFELTKRLEHD
FGKVTKQEVKDFFRWASDHVTEVTHEFYVRKGGARKRPAPNDADISEPKRACPSVA
QPSTSDAEAPVDYADRYQNKCSRHVGMNLMLFPCRQCERMNQNVDICFTHGVMDC
AECFPVSESQPVSVVRKRTYQKLCPIHHIMGRAPEVACSACELANVDLDDCDMEQ

FIGURE 5

atgccggggttctacgagatcgtgctgaaggtgcccagcgacctggacgagcacctgcccggcatttctgactcttttgtgagctgggtg
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aactgtgtccgattcatcacatcatggggagggcgcccgaggtggcctgctcggcctgcgaactggccaatgtggacttggatgactgtg
acatggaacaataa

FIGURE 6

MPGFYEIVLKVPSDLDEHLPGISNSFVNWVAEKEWELPPDSDMDPNLIEQAPLTVAEK
LQREFLVEWRRVSKAPEALFFVQFEKGETYFHLHVLIETIGVKSMVVGRYVSQIKEKL
VTRIYRGVEPQLPNWFAVTKTRNGAGGGNKVVDDCYIPNYLLPKTQPELQWAWTNM
DQYLSACLNLAERKRLVAQHLTHVSQTQEQNKENQNPNSDAPVIRSKTSARYMELVG
WLVDRGITSEKQWIQEDQASYISFNAASNSRSQIKAALDNASKIMSLTKTAPDYLVGSN
PPEDITKNRIYQILELNGYDPQYAASVFLGWAQKKFGKRNTIWLFGPATTGKTNIAEAI
AHAVPFYGCVNWTNENFPFNDCVDKMVIWWEEGKMTAKVVESAKAILGGSKVRVD
QKCKSSAQIEPTPVIVTSNTNMCAVIDGNSTTFEHQQPLQDRMFKFELTRRLDHDFGKV
TKQEVKDFFRWASDHVTDVAHEFYVRKGGAKKRPASNDADVSEPKRQCTSLAQPTTS
DAEAPADYADRYQNKCSRHVGMNLMLFPCKTCERMNQISNVCFTHGQRDCGECFPG
MSESQPVSVVKKKTYQKLCPIHHILGRAPEIACSACDLANVDLDDCVSE

FIGURE 7

atgccggggttctacgagattgtcctgaaggtcccgagtgacctggacgagcacctgccgggcatttctaactcgtttgttaactgggtgg
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gcgcgagttcctggtggagtggcgccgcgtgagtaaggccccggaggccctctttttgtccagttcgaaaaggggagacctacttcca
cctgcacgtgctgattgagaccatcggggtcaaatccatggtggtcggccgctacgtgagccagattaaagagaagctggtgacccgca
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gacgactgctacatccccaactacctgctccccaagacccagcccgagctccagtgggcgtggactaacatggaccagtatttaagcgc
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cttccgatcacgtgactgacgtggctcatgagttctacgtcagaaagggtggagctaagaaacgccccgcctccaatgacgcggatgtaa
gcgagccaaaacggcagtgcacgtcacttgcgcagccgacaacgtcagacgcggaagcaccggcggactacgcggacaggtacca
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ataa

FIGURE 8

MPGFYEIVLKVPSDLDERLPGISNSFVNWVAEKEWDVPPDSDMDPNLIEQAPLTVAEK
LQREFLVEWRRVSKAPEALFFVQFEKGETYFHLHVLIETIGVKSMVVGRYVSQIKEKL
VTRIYRGVEPQLPNWFAVTKTRNGAGGGNKVVDDCYIPNYLLPKTQPELQWAWTNM
DQYLSACLNLAERKRLVAQHLTHVSQTQEQNKENQNPNSDAPVIRSKTSARYMELVG
WLVDRGITSEKQWIQEDQASYISFNAASNSRSQIKAALDNASKIMSLTKTAPDYLVGSN
PPEDITKNRIYQILELNGYDPQYAASVFLGWAQKKFGKRNTIWLFGPATTGKTNIAEAI
AHAVPFYGCVNWTNENFPFNDCVDKMVIWWEEGKMTAKVVESAKAILGGSKVRVD
QKCKSSAQIEPTPVIVTSNTNMCAVIDGNSTTFEHQQPLQDRMFEFELTRRLDHDFGKV
TKQEVKDFFRWASDHVTDVAHEFYVRKGGAKKRPASNDADVSEPKRECTSLAQPTTS
DAEAPADYADRYQNKCSRHVGMNLMLFPCKTCERMNQISNVCFTHGQRDCGECFPG
MSESQPVSVVKKKTYQKLCPIHHILGRAPEIACSACDLANVDLDDCVSEQ

FIGURE 9

atgccggggttctacgagattgtcctgaaggtcccgagtgacctggacgagcgcctgccgggcatttctaactcgtttgttaactgggtgg
ccgagaaggaatgggacgtgccgccggattctgacatggatccgaatctgattgagcaggcacccctgaccgtggccgaaaagcttca
gcgcgagttcctggtggagtggcgccgcgtgagtaaggccccggaggccctctttttttgtccagttcgaaaaggggagacctacttcca
cctgcacgtgctgattgagaccatcggggtcaaatccatggtggtcggccgctacgtgagccagattaaagagaagctggtgacccgca
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ataa

FIGURE 10

MPGFYEIVIKVPSDLDEHLPGISDSFVSWVAEKEWELPPDSDMDLNLIEQAPLTVAEKL
QRDFLVQWRRVSKAPEALFFVQFEKGESYFHLHILVETTGVKSMVLGRFLSQIRDKLV
QTIYRGIEPTLPNWFAVTKTRNGAGGGNKVVDECYIPNYLLPKTQPELQWAWTNMEE
YISACLNLAERKRLVAQHLTHVSQTQEQNKENLNPNSDAPVIRSKTSARYMELVGWL
VDRGITSEKQWIQEDQASYISFNAASNSRSQIKAALDNAGKIMALTKSAPDYLVGPAPP
ADIKTNRIYRILELNGYEPAYAGSVFLGWAQKRFGKRNTIWLFGPATTGKTNIAEAIAH
AVPFYGCVNWTNENFPFNDCVDKMVIWWEEGKMTAKVVESAKAILGGSKVRVDQK
CKSSAQIDPTPVIVTSNTNMCAVIDGNSTTFEHQQPLQDRMFKFELTRRLEHDFGKVTK
QEVKEFFRWAQDHVTEVAHEFYVRKGGANKRPAPDDADKSEPKRACPSVADPSTSDA
EGAPVDFADRYQNKCSRHAGMLQMLFPCKTCERMNQNFNICFTHGTRDCSECFPGVS
ESQPVVRKRTYRKLCAIHHLLGRAPEIACSACDLVNVDLDDCVSEQ

FIGURE 11

atgccgggcttctacgagatcgtgatcaaggtgccgagcgacctggacgagcacctgccgggcatttctgactcgtttgtgagctgggtg
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gataaaagcgagcccaagcgggcctgcccctcagtcgcggatccatcgacgtcagacgcggaaggagctccggtggactttgccgac
aggtaccaaaacaaatgttctcgtcacgcgggcatgcttcagatgctgtttccctgcaagacatgcgagagaatgaatcagaatttcaacat
ttgcttcacgcacgggacgagagactgttcagagtgcttccccggcgtgtcagaatctcaaccggtcgtcagaaagaggacgtatcgga
aactctgtgccattcatcatctgctggggcgggctcccgagattgcttgctcggcctgcgatctggtcaacgtggacctggatgactgtgttt
ctgagcaataa

FIGURE 12

MPGFYEIVIKVPSDLDEHLPGISDSFVNWVAEKEWELPPDSDMDLNLIEQAPLTVAEKL
QRDFLVQWRRVSKAPEALFFVQFEKGESYFHLHILVETTGVKSMVLGRFLSQIRDKLV
QTIYRGIEPTLPNWFAVTKTRNGAGGGNKVVDECYIPNYLLPKTQPELQWAWTNMEE
YISACLNLAERKRLVAHDLTHVSQTQEQNKENLNPNSDAPVIRSKTSARYMELVGWL
VDRGITSEKQWIQEDQASYISFNAASNSRSQIKAALDNAGKIMALTKSAPDYLVGPAPP
ADIKTNRIYRILELNGYDPAYAGSVFLGWAQKRFGKRNTIWLFGPATTGKTNIAEAIAH
AVPFYGCVNWTNENFPFNDCVDKMVIWWEEGKMTAKVVESAKAILGGSKVRVDQK
CKSSAQIDPTPVIVTSNTNMCAVIDGNSTTFEHQQPLQDRMFKFELTRRLEHDFGKVTK
QEVKEFFRWAQDHVTEVAHEFYVRKGGANKRPAPDDADKSEPKRACPSVADPSTSDA
EGAPVDFADRYQNKCSRHAGMLQMLFPCKTCERMNQNFNICFTHGTRDCSECFPGVS
ESQPVVRKRTYRKLCAIHHLLGRAPEIACSACDLVNVDLDDCVSEQ

FIGURE 13

atgccggggttttacgagattgtgattaaggtccccagcgaccttgacgagcatctgcccggcatttctgacagctttgtgaactgggtggc
cgagaaggaatgggagttgccgccagattctgacatggatctgaatctgattgagcaggcacccctgaccgtggccgagaagctgcag
cgcgacttcctggtccagtggcgccgcgtgagtaaggccccggaggccctcttctttgttcagttcgagaagggcgagtcctacttccac
ctccatattctggtggagaccacgggggtcaaatccatggtgctgggccgcttcctgagtcagattagggacaagctggtgcagaccatc
taccgcgggatcgagccgaccctgcccaactggttcgcggtgaccaagacgcgtaatggcgccggaggggggaacaaggtggtgga
cgagtgctacatccccaactacctcctgcccaagactcagcccgagctgcagtgggcgtggactaacatggaggagtatataagcgcgt
gtttaaacctggccgagcgcaaacggctcgtggcgcacgacctgacccacgtcagccagacccaggagcagaacaaggagaatctga
accccaattctgacgcgcctgtcatccggtcaaaaacctccgcacgctacatggagctggtcgggtggctggtggaccggggcatcacc
tccgagaagcagtggatccaggaggaccaggcctcgtacatctccttcaacgccgcctccaactcgcggtcccagatcaaggccgctct
ggacaatgccggcaagatcatggcgctgaccaaatccgcgcccgactacctggtaggccccgctccgcccgccgacattaaaaccaa
ccgcatttaccgcatcctggagctgaacggctacgaccctgcctacgccggctccgtctttctcggctgggcccagaaaaggttcggaaa
acgcaacaccatctggctgtttgggccggccaccacgggcaagaccaacatcgcggaagccatcgcccacgccgtgcccttctacggc
tgcgtcaactggaccaatgagaactttcccttcaacgattgcgtcgacaagatggtgatctggtgggaggagggcaagatgacggccaa
ggtcgtggagtccgccaaggccattctcggcggcagcaaggtgcgcgtggaccaaaagtgcaagtcgtccgcccagatcgatcccac
ccccgtgatcgtcacctccaacaccaacatgtgcgccgtgattgacgggaacagcaccaccttcgagcaccagcagccgttgcaggac
cggatgttcaaatttgaactcacccgccgtctggagcatgacttttggcaaggtgacaaagcaggaagtcaaagagttcttccgcgtgggcg
caggatcacgtgaccgaggtggcgcatgagttctacgtcagaaagggtggagccaacaagagacccgcccccgatgacgcggataaa
agcgagcccaagcgggcctgcccctcagtcgcggatccatcgacgtcagacgcggaaggagctccggtggactttgccgacaggtac
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acgcacgggaccagagactgttcagaatgtttccccggcgtgtcagaatctcaaccggtcgtcagaaagaggacgtatcggaaactctgt
gccattcatcatctgctggggcgggctcccgagattgcttgctcggcctgcgatctggtcaacgtggatctggatgactgtgtttctgagca
ataa

FIGURE 14

MPGFYEIVIKVPSDLDEHLPGISDSFVNWVAEKEWELPPDSDMDLNLIEQAPLTVAEKL
QRDFLTEWRRVSKAPEALFFVQFEKGESYFHMHVLVETTGVKSMVLGRFLSQIREKLI
QRIYRGIEPTLPNWFAVTKTRNGAGGGNKVVDECYIPNYLLPKTQPELQWAWTNMEQ
YLSACLNLTERKRLVAQHLTHVSQTQEQNKENQNPNSDAPVIRSKTSARYMELVGWL
VDKGITSEKQWIQEDQASYISFNAASNSRSQIKAALDNAGKIMSLTKTAPDYLVGQQP
VEDISSNRIYKILELNGYDPQYAASVFLGWATKKFGKRNTIWLFGPATTGKTNIAEAIA
HTVPFYGCVNWTNENFPFNDCVDKMVIWWEEGKMTAKVVESAKAILGGSKVRVDQ
KCKSSAQIDPTPVIVTSNTNMCAVIDGNSTTFEHQQPLQDRMFKFELTRRLDHDFGKVT
KQEVKDFFRWAKDHVVEVEHEFYVKKGGAKKRPAPSDADISEPKRVRESVAQPSTSD
AEASINYADRLARGHSL

FIGURE 15

atgccggggttttacgagattgtgattaaggtccccagcgaccttgacgagcatctgcccggcatttctgacagctttgtgaactgggtggc
cgagaaggaatgggagttgccgccagattctgacatggatctgaatctgattgagcaggcacccctgaccgtggccgagaagctgcag
cgcgactttctgacggaatggcgccgtgtgagtaaggccccggaggccctttttctttgtgcaatttgagaagggagagagctacttccaca
tgcacgtgctcgtggaaaccaccggggtgaaatccatggttttgggacgtttcctgagtcagattcgcgaaaaactgattcagagaatttac
cgcgggatcgagccgactttgccaaactggttcgcggtcacaaagaccagaaatggcgccggaggcgggaacaaggtggtggatga
gtgctacatccccaattacttgctccccaaaacccagcctgagctccagtgggcgtggactaatatggaacagtatttaagcgcctgtttga
atctcacggagcgtaaacggttggtggcgcagcatctgacgcacgtgtcgcagacgcaggagcagaacaaagagaatcagaatccca
attctgatgcgccggtgatcagatcaaaaacttcagccaggtacatggagctggtcgggtggctcgtggacaaggggattacctcggag
aagcagtggatccaggaggaccaggcctcatacatctccttcaatgcggcctccaactcgcggtcccaaatcaaggctgccttggacaat
gcgggaaagattatgagcctgactaaaaccgcccccgactacctggtgggccagcagcccgtggaggacatttccagcaatcggattta
taaaattttggaactaaacgggtacgatccccaatatgcggcttccgtctttctgggatgggccacgaaaaagttcggcaagaggaacacc
atctggctgtttgggcctgcaactaccgggaagaccaacatcgcggaggccatagcccacactgtgcccttctacgggtgcgtaaactg
gaccaatgagaactttcccttcaacgactgtgtcgacaagatggtgatctggtgggaggaggggaagatgaccgccaaggtcgtggagt
cggccaaagccattctcggaggaagcaaggtgcgcgtggaccagaaatgcaagtcctcggcccagatagacccgactcccgtgatcgt
cacctccaacaccaacatgtgcgccgtgattgacgggaactcaacgaccttcgaacaccagcagccgttgcaagacggatgttcaaatt
tgaactcacccgccgtctggatcatgacttcgggaaggtcaccaagcaggaagtcaaagacttttccggtgggcaaaggatcacgtggtt
gaggtggagcatgaattctacgtcaaaaagggtggagccaagaaaagacccgcccccagtgacgcagatataagtgagcccaaacgg
gtgcgcgagtcagttgcgcagccatcgacgtcagacgcggaagcttcgatcaactacgcagacagcttttgggggcaacctcggacga
gc

FIGURE 16

MPGFYEIVIKVPSDLDGHLPGISDSFVNWVAEKEWELPPDSDMDLNLIEQAPLTVAEKL
QRDFLTEWRRVSKAPEALFFVQFEKGESYFHMHVLVETTGVKSMVLGRFLSQIREKLI
QRIYRGIEPTLPNWFAVTKTRNGAGGGNKVVDECYIPNYLLPKTQPELQWAWTNMEQ
YLSACLNLTERKRLVAQHLTHVSQTQEQNKENQNPNSDAPVIRSKTSARYMELVGWL
VDKGITSEKQWIQEDQASYISFNAASNSRSQIKAALDNAGKIMSLTKTAPDYLVGQQP
VEDISSNRIYKILELNGYDPQYAASVFLGWATKKFGKRNTIWLFGPATTGKTNIAEAIA
HTVPFYGCVNWTNENFPFNDCVDKMVIWWEEGKMTAKVVESAKAILGGSKVRVDQ
KCKSSAQIDPTPVIVTSNTNMCAVIDGNSTTFEHQQPLQDRMFKFELTRRLDHDFGKVT
KQEVKDFFRWAKDHVVEVEHEFYVKKGGAKKRPAPSDADISEPKRVRESVAQPSTSD
AEASINYADRLARGHSL

FIGURE 17

atgccggggttttacgagattgtgattaaggtccccagcgaccttgacgagcatctgcccggcatttctgacagctttgtgaactgggtggc
cgagaaggaatgggagttgccgccagattctgacatggatctgaatctgattgagcaggcacccctgaccgtggccgagaagctgcag
cgcgactttctgacggaatggcgccgtgtgagtaaggccccggaggccctttttctttgtgcaatttgagaagggagagagctacttccaca
tgcacgtgctcgtggaaaccaccggggtgaaatccatggttttgggacgtttcctgagtcagattcgcgaaaaactgattcagagaatttac
cgcgggatcgagccgactttgccaaactggttcgcggtcacaaagaccagaaatggcgccggaggcgggaacaaggtggtggatga
gtgctacatccccaattacttgctccccaaaacccagcctgagctccagtgggcgtggactaatatggaacagtatttaagcgcctgtttga
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aagcagtggatccaggaggaccaggcctcatacatctccttcaatgcggcctccaactcgcggtcccaaatcaaggctgccttggacaat
gcgggaaagattatgagcctgactaaaaccgccccgactacctggtgggccagcagcccgtggaggacatttccagcaatcggattta
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cggccaaagccattctcggaggaagcaaggtgcgcgtggaccagaaatgcaagtcctcggcccagatagacccgactcccgtgatcgt
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gaggtggagcatgaattctacgtcaaaaagggtggagccaagaaaagaccc gccccagtgccgcagataaagtgagcccaaacgg
gtgcgcgagtcagttgcgcagccatcgacgtcagacgcggaagcttcgatcaactacgcagacagattggctcgaggacactctctctg
a

FIGURE 18

MELVGWLVDKGITSEKQWIQEDQASYISFNAASNSRSQIKAALDNAGKIMSLTKTAPD
YLVGQQPVEDISSNRIYKILELNGYDPQYAASVFLGWATKKFGKRNTIWLFGPATTGK
TNIAEAIAHTVPFYGCVNWTNENFPFNDCVDKMVIWWEEGKMTAKVVESAKAILGGS
KVRVDQKCKSSAQIDPTPVIVTSNTNMCAVIDGNSTTFEHQQPLQDRMFKFELTRRLD
HDFGKVTKQEVKDFFRWAKDHVVEVEHEFYVKKGGAKKRPAPSDADISEPKRVRESV
AQPSTSDAEASINYADRYQNKCSRHVGMNLMLFPCRQCERMNQNSNICFTHGQKDCL
ECFPVSESQPVSVVKKAYQKLCYIHHIMGKVPDACTACDLVNVDLDDCIFEQ

FIGURE 19

atggagctggtcgggtggctcgtggacaaggggattacctcggagaagcagtggatccaggaggaccaggcctcatacatctccttcaa
tgcggcctccaactcgcggtcccaaatcaaggctgccttggacaatgcgggaaagattatgagcctgactaaaaccgccccgactacc
tggtgggccagcagcccgtggaggacatttccagcaatcggatttataaaattttggaactaaacgggtacgatccccaatatgcggct[1]t
ccgtctttctgggatgggccacgaaaaagttcggcaagaggaacaccatctggctgtttgggcctgcaactaccgggaagaccaacatc
gcggaggccatagcccacactgtgcccttctacgggtgcgtaaactggaccaatgagaactttcccttcaacgactgtgtcgacaagatg
gtgatctggtgggaggaggggaagatgaccgccaaggtcgtggagtcggccaaagccattctcggaggaagcaaggtgcgcgtgga
ccagaaatgcaagtcctcggcccagatagacccgactcccgtgatcgtcacctccaacaccaacatgtgcgccgtgattgacgggaact
caacgaccttcgaacaccagcagccgttgcaagaccggatgttcaaatttgaactcacccgccgtctggatcatgactttgggaaggtca
ccaagcaggaagtcaaagacttttccggtgggcaaaggatcacgtggttgaggtggagcatgaattctacgtcaaaaagggtggagcc
aagaaaagacccgcccccagtgacgcagatataagtgagcccaaacgggtgcgcgagtcagttgcgcagccatcgacgtcagacgc
ggaagcttcgatcaactacgcagacaggtaccaaaacaaatgttctcgtcacgtgggcatgaatctgatgctgtttccctgcagacaatgc
gagagaatgaatcagaattcaaatatctgcttcactcacggacagaaagactgtttagagtgctttcccgtgtcagaatctcaacccgtttct
gtcgtcaaaaaggcgtatcagaaactgtgctacattcatcatatcatgggaaaggtgccagacgcttgcactgcctgcgatctggtcaatgt
ggatttggatgactgcatctttgaacaataa

FIGURE 20

MATFYEVIVRVPFDVEEHLPGISDSFVDWVTGQIWELPPESDLNLTLVEQPQLTVADRI
RRVFLYEWNKFSKQESKFFVQFEKGSEYFHLHTLVETSGISSMVLGRYVSQIRAQLVK
VVFQGIEPQINDWVAITKVKKGGANKVVDSGYIPAYLLPKVQPELQWAWTNLDEYKL
AALNLEERKRLVAQFLAESSQRSQEAASQREFSADPVIKSKTSQKYMALVNWLVEHGI
TSEKQWIQENQESYLSFNSTGNSRSQIKAALDNATKIMSLTKSAVDYLVGSSVPEDISK
NRIWQIFEMNGYDPAYAGSILYGWCQRSFNKRNTVWLYGPATTGKTNIAEAIAHTVPF
YGCVNWTNENFPFNDCVDKMLIWWEEGKMTNKVVESAKAILGGSKVRVDQKCKSS
VQIDSTPVIVTSNTNMCVVVDGNSTTFEHQQPLEDRMFKFELTKRLPPDFGKITKQEVK
DFFAWAKVNQVPVTHEFKVPRELAGTKGAEKSLKRPLGDVTNTSYKSLEKRARLSFV
PETPRSSDVTVDPAPLRPLNWNSRYDCKCDYHAQFDNISNKCDECEYLNRGKNGCICH
NVTHCQICHGIPPWEKENLSDFGDFDDANKEQ

FIGURE 21

atggctaccttctatgaagtcattgttcgcgtcccatttgacgtggaggaacatctgcctggaatttctgacagctttgtggactgggtaactg
gtcaaatttgggagctgcctccagagtcagatttaaatttgactctggttgaacagcctcagttgacggtggctgatagaattcgccgcgtgt
tcctgtacgagtggaacaaatttccaagcaggagtccaaattctttgtgcagtttgaaaagggatctgaatattttcatctgcacacgcttgtg
gagacctccggcatctcttccatggtcctcggccgctacgtgagtcagattcgcgcccagctggtgaaagtggtcttccagggaattgaac
cccagatcaacgactgggtcgccatcaccaaggtaaagaagggcggagccaataaggtggtggattctgggtatattcccgcctacctg
ctgccgaaggtccaaccggagcttcagtgggcgtggacaaacctggacgagtataaattggccgccctgaatctggaggagcgcaaac
ggctcgtcgcgcagtttctggcagaatcctcgcagcgctcgcaggaggcggcttcgcagcgtgagttctcggctgacccggtcatcaaa
agcaagacttcccagaaatacatggcgctcgtcaactggctcgtggagcacggcatcacttccgagaagcagtggatccaggaaaatca
ggagagctacctctccttcaactccaccggcaactctcggagccagatcaaggccgcgctcgacaacgcgaccaaaattatgagtctga
caaaaagcgcggtggactacctcgtggggagctccgttcccgaggacatttcaaaaaacagaatctggcaaatttttgagatgaatggct
acgacccggcctacgcgggatccatcctctacggctggtgtcagcgctccttcaacaagaggaacaccgtctggctctacggacccgcc
acgaccggcaagaccaacatcgcggaggccatcgcccacactgtgccctttacggctgcgtgaactggaccaatgaaaactttcccttt
aatgactgtgtggacaaaatgctcatttggtgggaggagggaaagatgaccaacaaggtggttgaatccgccaaggccatcctggggg
gctcaaaggtgcgggtcgatcagaaatgtaatcctctgttcaaattgattctaccgctgtcattgtaagttccaatacaaacatgtgtgtggt
ggtggatgggaattccacgacctttgaacaccagcagccgctggaggaccgcatgttcaaatttgaactgactaagcggctcccgccag
attttggcaagattactaagcaggaagtcaaggacttttttgcttgggcaaaggtcaatcaggtgccggtgactcacgagtttaaagttccca
gggaattggcgggaactaaaggggcggagaaatctctaaaacgcccactgggtgacgtcaccaatactagctataaaagtctggagaa
gcgggccaggctctcatttgttcccgagacgcctcgcagttcagacgtgactgttgatcccgctcctctgcgaccgctcaattggaattcaa
ggtatgattgcaaatgtgactatcatgctcaatttgacaacatttctaacaaatgtgatgaatgtgaatatttgaatcggggcaaaaatggatgt
atctgtcacaatgtaactcactgtcaaatttgtcatgggattccccccctgggaaaaggaaaacttgtcagattttggggattttgacgatgcca
ataaagaacagtaa

FIGURE 22

MELVGWLVDKGITSEKQWIQEDQASYISFNAASNSRSQIKAALDNAGKIMSLTKTAPD
YLVGQQPVEDISSNRIYKILELNGYDPQYAASVFLGWATKKFGKRNTIWLFGPATTGK
TNIAEAIAHTVPFYGCVNWTNENFPFNDCVDKMVIWWEEGKMTAKVVESAKAILGGS
KVRVDQKCKSSAQIDPTPVIVTSNTNMCAVIDGNSTTFEHQQPLQDRMFKFELTRRLD
HDFGKVTKQEVKDFFRWAKDHVVEVEHEFYVKKGGAKKRPAPSDADISEPKRVRESV
AQPSTSDAEASINYADRLARGHSL

FIGURE 23

atggagctggtcgggtggctcgtggacaaggggattacctcggagaagcagtggatccaggaggaccaggcctcatacatctccttcaa
tgcggcctccaactcgcggtcccaaatcaaggctgccttggacaatgcgggaaagattatgagcctgactaaaaccgcccccgactacc
tggtgggccagcagcccgtggaggacatttccagcaatcggatttataaaattttggaactaaacgggtacgatccccaatatgcggcttc
cgtctttctgggatgggccacgaaaaagttcggcaagaggaacaccatctggctgtttgggcctgcaactaccgggaagaccaacatcg
cggaggccatagcccacactgtgcccttctacgggtgcgtaaactggaccaatgagaactttcccttcaacgactgtgtcgacaagatggt
gatctggtgggaggaggggaagatgaccgccaaggtcgtggagtcggccaaagccattctcggaggaagcaaggtgcgcgtggacc
agaaatgcaagtcctcggcccagatagacccgactcccgtgatcgtcacctccaacaccaacatgtgcgccgtgattgacgggaactca
acgaccttcgaacaccagcagccgttgcaagaccggatgttcaaatttgaactcacccgccgtctggatcatgactttgggaaggtcacc
aagcaggaagtcaaagacttttccggtgggcaaaggatcacgtggttgaggtggagcatgaattctacgtcaaaaagggtggagccaa
gaaaagacccgcccccagtgacgcagatataagtgagcccaaacgggtgcgcgagtcagttgcgcagccatcgacgtcagacgcgg
aagcttcgatcaactacgcagacagcttttgggggcaacctcggacgagc

FIGURE 24

MAFSRPLQISSDKFYEVIIRLPSDIDQDVPGLSLNFVEWLSTGVWEPTGIWNMEHVNLP
MVTLADKIKNIFIQRWNQFNQDETDFFFQLEEGSEYIHLHCCIAQGNVRSFVLGRYMSQ
IKDSILRDVYEGKQVKIPDWFSITKTKRGGQNKTVTAAYILHYLIPKKQPELQWAFTN
MPLFTAAALCLQKRQELLDAFQESEMNAVVQEDQASTAAPLISNRAAKNYSNLVDWL
IEMGITSEKQWLTENKESYRSFQATSSNNRQVKAALENARAEMLLTKTATDYLIGKDP
VLDITKNRIYQILKLNNYNPQYVGSVLCGWVKREFNKRNAIWLYGPATTGKTNIAEAI
AHAVPFYGCVNWTNENFPFNDCVDKMLIWWEEGKMTNKVVESAKAILGGSAVRVD
QKCKGSVCIEPTPVIITSNTDMCMIVDGNSTTMEHRIPLEERMFQIVLSHKLEGNFGKIS
KKEVKEFFKWANDNLVPVVSEFKVPTNEQTKLTEPVPERANEPSEPPKIWAPPTREELE
EILRASPELFASVAPLPSSPDTSPKRKKTRGEYQVRCAMHSLDNSMNVFECLECERANF
PEFQSLGENFCNQHGWYDCAFCNELKDDMNEIEHVFAIDDMENEQ

FIGURE 25

atggcattttctaggcctcttcagatttcttctgacaaattctatgaagttatcatcaggctaccctcggatattgatcaagatgtgcctggtttgt
ctcttaactttgtagaatggctttctacgggggtctgggagcccaccggaatatggaatatggagcatgtgaatctccccatggttactctgg
cagacaaaatcaagaacattttcatccagagatggaaccaattcaatcaggacgaaacggatttcttctttcaattggaagaaggcagtga
gtacatccatctgcattgctgtattgcccaggggaatgtccgatcttttgttctggggagatacatgtctcaaattaaagactcaattctgaga
gatgtgtatgaagggaaacaggtaaaaatcccggattggttttctataactaaaaccaaacggggagggcaaaataagaccgtgactgct
gcttatattctgcattacctgattcctaaaaaacaaccggaattacaatgggcttttaccaatatgccccttttcactgctgctgctttatgcctcc
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tgcgttgataaaatgcttatatggtgggaggagggaaaaatgaccaataaagtagtggaatccgcaaaagcgatactgggggggtctgct
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aacttactgagcccgttcctgaacgagcgaatgagccttccgagcctcctaagatatgggctccacctactagggaggagctagaggag
atattaagagcgagccctgagctctttgcttcagttgctcctctgccttccagtccggacacatctcctaagagaaagaaaacccgtgggga
gtatcaggtacgctgtgctatgcacagtttagataactctatgaatgtttttgaatgcctggagtgtgaaagagctaattttcctgaatttcaga
gtctgggtgaaaactttgtaatcaacatgggtggtatgattgtgcattctgtaatgaactgaaagatgacatgaatgaaattgaacatgttttt
gctattgatgatatggagaatgaacaataa

FIGURE 26

MALSRPLQISSDKFYEVIIRLSSDIDQDVPGLSLNFVEWLSTGVWEPTGIWNMEHVNLP
MVTLAEKIKNIFIQRWNQFNQDETDFFFQLEEGSEYIHLHCCIAQGNVRSFVLGRYMSQ
IKDSIIRDVYEGKQIKIPDWFAITKTKRGGQNKTVTAAYILHYLIPKKQPELQWAFTNM
PLFTAAALCLQKRQELLDAFQESDLAAPLPDPQASTVAPLISNRAAKNYSNLVDWLIE
MGITSEKQWLTENRESYRSFQATSSNNRQVKAALENARAEMLLTKTATDYLIGKDPV
LDITKNRVYQILKMNNYNPQYIGSILCGWVVKREFNKRNAIWLYGPATTGKTNIAEAIA
HAVPFYGCVNWTNENFPFNDCVDKMLIWWEEGKMTNKVVESAKAILGGSAVRVDQ
KCKGSVCIEPTPVIITSNTDMCMIVDGNSTTMEHRIPLEERMFQIVLSHKLEPSFGKISKK
EVREFFKWANDNLVPVVSEFKVRTNEQTNLPEPVPERANEPEEPPKIWAPPTREELEEL
LRASPELFSSVAPIPVTPQNSPEPKRSRNNYQVRCALHTYDNSMDVFECMECEKANFPE
FQPLGENYCDEHGWYDCAICKELKNELAEIEHVFELDDAENEQ

FIGURE 27

atggcactttctaggcctcttcagatttcttctgataaattctatgaagttattattagattatcatcggatattgatcaagatgtccccggtctgtc
tcttaactttgtagaatggctttctaccggagtttgggagcccacgggcatctggaacatggagcatgtgaatctaccgatggtgaccttgg
cagagaagatcaagaacattttcatacaaagatggaatcagttcaaccaggacgaaacggacttcttctttcaactggaagaaggcagtga
gtacattcatcttcattgctgtattgcccagggcaatgtacggtcttttgttctcgggagatatatgtctcagataaaagactctatcataagag
atgtatatgaagggaaacaaatcaagatccccgattggtttgctattactaaaaccaagaggggaggacagaataagaccgtgactgcag
catacatactgcattaccttattcctaaaaagcaacctgaactgcaatgggcctttaccaatatgcctttattcactgctgctgctctttgtctgc
aaaagcggcaagaattgctggatgcatttcaagaaagtgatttggctgccccttacctgatcctcaagcatcaactgtggcaccgcttattt
ccaacagagcggcaaagaactatagcaaccttgttgattggctcattgaaatggggataacatctgagaagcaatggctcactgagaacc
gagagagctacagaagctttcaagcaacttcttcaaataatagacaagtgaaagctgcactggaaaatgcccgtgctgaaatgttattgac
aaagactgcaactgattacctgataggaaaagaccctgtcctggatataactaagaatagggtctatcaaattctgaaaatgaataactaca
accctcaatacataggaagtatcctgtgcggctgggtgaagagagagttcaacaaaagaaacgccatatggctctacggacctgccacc
accgggaagaccaacattgcagaagctattgcccatgctgtacccttctatggctgtgttaactggactaatgagaactttccttttaatgatt
gtgttgataaaatgctgatttggtgggaggagggaaaaatgactaataaggttgttgaatctgcaaaagcaattttgggagggtctgctgtc
cgggtagaccagaaatgtaaaggatctgtttgtattgaacctactcctgtaattattactagtaatactgatatgtgtatgattgttgatggcaac
ictactacaatggaacatagaaiaccattagaggagcgtatgttcaaattgtcctatcacataaattggagccttcttttggaaaaatttctcaa
aaagaagtcagagaatttttcaaatgggccaatgacaatctagttcctgttgtgtctgagttcaaagtccgaactaatgaacaaaccaacttg
ccagagcccgttcctgaacgagcgaacgagccggaggagcctcctaagatctgggctcctcctactagggaggagttagaagagctttt
aagagccagcccagaattgttctcatcagtcgctccaattcctgtgactcctcagaactcccctgagcctaagagaagcaggaacaattac
caggtacgctgcgctttgcatacttatgacaattctatggatgtatttgaatgtatggaatgtgagaaagcaaactttcctgaatttcaacctct
gggagaaaattattgtgatgaacatgggtggtatgattgtgctatatgtaaagagttgaaaaatgaacttgcagaaattgagcatgtgtttga
gcttgatgatgctgaaaatgaacaataa

FIGURE 28

MAFSRPLQISSDKFYEVIIRLPSDIDQDVPGLSLNFVEWLSTGVWEPTGIWNMEHVNLP
MVTLADKIKNIFIQRWNQFNQDETDFFFQLEEGSEYIHLHAVCPGECRSFVLGRYMSQI
KDSILRDVYEGKQVKIPDWFSITKTKRGGQNKTVTAAYILHYLIPKKQPELQWAFTNM
PLFTAAALCLQKRQELLDAFQESEMNAVVQEDQASTAAPLISNRAAKNYSNLVDWLIE
MGITSEKQWLTENKESYRSFQATSSNNRQVKAALENARAEMLLTKTATDYLIGKDPV
LDITKNRIYQILKLNNYNPQYVGSVLCGWVKREFNKRNAIWLYGPATTGKTNIAEAIA
HAVPFYGCVNWTNENFPFNDCVDKMLIWWEEGKMTNKVVESAKAILGGSAVRVDQ
KCKGSVCIEPTPVIITSNTDMCMIVDGNSTTMEHRIPLEERMFQIVLSHKLEGNFGKISK
KEVKEFFKWANDNLVPVVSEFKVPTNEQTKLTEPVPERANEPSEPPKIWAPPTREELEE
ILRASPELFASVAPLPSSPDTSPKRKKTRGEYQVRCAMHSLDNSMNVFECLECERANFP
EFQSLGENFCNQHGWYDCAFCNELKDDMNEIEHVFAIDDMENEQ

FIGURE 29

atggcattttctaggcctcttcagatttcttctgacaaattctatgaagttatcatcaggctaccctcggatattgatcaagatgtgcctggtttgt
ctcttaactttgtagaatggctttctacgggggtctgggagcccaccggaatatggaatatggagcatgtgaatctccccatggttactctgg
cagacaaaatcaagaacattttcatccagagatggaaccaattcaatcaggacgaaacggatttcttctttcaattggaagaaggcagtga
gtacatccatctgcatgctgtatgcccaggggaatgtcgatcttttgttctggggagatacatgtctcaaattaaagactcaattctgagagat
gtgtatgaagggaaacaggtaaaaatcccggattggttttctataactaaaaccaaacggggagggcaaaataagaccgtgactgctgct
tatattctgcattacctgattcctaaaaaacaaccggaattacaatgggcttttaccaatatgccccttttcactgctgctgctttatgcctccaa
aagaggcaagagttactggatgcttttcaggaaagtgagatgaatgctgtagtgcaggaggatcaagcttcaactgcagctccccttatttc
caacagagcagcaaagaactatagcaatctggttgattggctcattgagatgggtatcacctctgaaaaacagtggctaactgaaaataaa
gagagctaccggagctttcaggctacatcttcaaacaacagacaagtaaaagcagcacttgaaaatgcccgagcagaaatgctactaac
aaaaactgccacagactatttgattggaaaagacccagttctggacattactaaaaatcggatctatcaaattctgaagttgaataactataac
cctcaatatgtagggagcgtcctatgcggatgggtgaaaagagaattcaacaaaagaaatgccatatggctctacggacctgcgaccac
cggaaagaccaacatagccgaggctattgcccatgctgtacccttctatggctgtgttaactggactaatgagaacttcccatttaatgactg
cgttgataaaatgcttatatggtgggaggagggaaaaatgaccaataaagtagtggaatccgcaaaagcgatactgggggggtctgctgt
acgagttgatcaaaagtgtaaggggtctgtttgtattgaacctactcctgtaataattaccagtaatactgatatgtgcatgattgtggatggaa
attctactacaatggaacacagaattcctttggaggaaagaatgttccagattgttctttcccataagctggaaggaaatttggaaaaatttca
aaaaaggaggtaaaagagtttttcaaatgggccaatgataatcttgttccagtagtttctgagttcaaagtccctacgaatgaacaaaccaaa
cttactgagcccgttcctgaacgagcgaatgagccttccgagcctcctaagatatgggctccacctactagggaggagctagaggagata
ttaagagcgagccctgagctctttgcttcagttgctcctctgccttccagtccggacacatctcctaagagaaagaaaacccgtggggagt
atcaggtacgctgtgctatgcacagtttagataactctatgaatgtttttgaatgcctggagtgtgaaagagctaattttcctgaatttcagagtc
tgggtgaaaactttgtaatcaacatgggtggtatgattgtgcattctgtaatgaactgaaagatgacatgaatgaaattgaacatgtttttgct
attgatgatatggagaatgaacaataa

FIGURE 30

RPELQWAFTNMPLFTAAALCLQKRQELLDAFQESDLAAPLPDPQASTVAPLISNRAAK
NYSNLVDWLIEMGITSEKQWLTENRESYRSFQATSSNNRQVKAALENARAEMLLTKT
ATDYLIGKDPVLDITKNRVYQILKMNNYNPQYIGSILCGWVKREFNKRNAIWLYGPAT
TGKTNIAEAIAHAVPFYGCVNWTNENFPFNDCVDKMLIWWEEGKMTNKVVESAKAIL
GGSAVRVDQKCKGSVCIEPTPVIITSNTDMCMIVDGNSTTMEHRIPLEERMFQIVLSHK
LEPSFGKISKKEVREFFKWANDNLVPVVSELKVRTNEQTNLPEPVPERANEPEEPPKIW
APPTREELEELLRASPELFSSVAPIPVTPQNSPEPKRSRNNYQVRCALHTYDNSMDVFE
CMECEKANFPEFQPLGENYCDEHGWYDCAICKELKNELAEIEHVFELDDAENEQ

FIGURE 31

cgacctgaactgcagtgggcctttaccaatatgcctttatttactgctgctgctctttgtctgcaaaagcggcaagaattgctggatgcatttca
agagagtgatttggctgcccctttacctgatcctcaagcatcaactgtggcaccgcttatttccaacagagcggcaaagaactatagcaac
cttgttgattggctcattgaaatgggcataacatctgagaagcaatggctcactgagaaccgagagagctacagaagctttcaagcaactt
cttcaaataatagacaagtgaaagctgcactggagaatgcccgtgctgaaatgctattaacaaagactgcaactgattacctgataggaaa
agaccctgtcctggatataactaagaacagggtctatcaaattctgaaaatgaataactacaaccctcaatacataggaagtatcctgtgcg
gctgggtgaagagagagttcaacaaaagaaacgccatatggctctacggacctgccaccaccgggaagaccaacattgcagaagctat
tgcccatgctgtaccttctatggctgcgttaactggactaatgagaactttccttttaatgattgtgttgataagatgctgatttggtgggagga
gggaaaaatgactaataaggttgttgaatctgcaaaagcaattttgggagggtctgctgtccgggtagaccagaaatgtaaaggatctgttt
gtattgaacctactcctgtaattattaccagtaatactgatatgtgtatgattgttgatggcaactctactacaatggaacatagaataccattag
aggagcgcatgtttcaaattgtcctatcacataaattggagccttctttcggaaaaatatctaaaaaggaagtcagagaatttttcaaatgggc
caacgacaatttagttcctgttgtgtctgagctcaaagtccgaacgaatgaacaaaccaacttgccagagcccgttcctgaacgagcgaac
gagccagaggagcctcctaaaatctgggctcctcctactagggaggagttagaagagcttttaagagccagcccagaattgttctcatca
gttgctccaattcctgtgactcctcagaactcccctgagcctaagagaagcaggaacaattaccaggtacgctgtgctttgcatacttatgac
aattctatggatgtctttgaatgtatggaatgtgagaaggcaaattttcctgaatttcaacctctgggagaaaattattgtgatgaacatgggtg
gtatgattgtgctatatgtaaagaattgaaaaatgaacttgcagaaattgagcatgtgtttgagcttgatgatgctgaaaatgaacaataa

FIGURE 32

MAQACLSLSWADCFAAVIKLPCPLEEVLSNSQFWQYYVLCKDPLDWPALQVTELAHG
WEVGAYCAFADALYLYLVGRLADEFSAYLLFFQLEPGVENPHIHVVAQATQLSAFNW
RRILTQACHDMALGFLKPDYLGWAKNCVNIKKDKSGRILRSDWQFVETYLLPKVPLS
KVWYAWTNKPEFEPIALSAAARDRLMRGNALCNQPGPGPSFGDRAEIQGPPIKKTKAS
DEFYTLCHWLAQEGILTEPAWRQRDLDGYVRMHTSTQGRQQVVSALAMAKNIILDSI
PNSVFATKAEVVTELCFESNRCVRLLRTQGYDPVQFGCWVLRWLDRKTGKKNTIWFY
GVATTGKTNLANAIAHSLPCYGCVNWTNENFPFNDAPDKCVLFWDEGRVTAKIVESV
KAVLGGQDIRVDQKCKGSSFLRATPVIITSNGDMTVVRDGNTTTFAHRPAFKDRMVRL
NFDVRLPNDFGLITPTEVREWLRYCKEQGDDYEFPDQMYQFPRDVVSVPAPPALPQPG
PVTNAPEEEILDLLTQTNFVTQPGLSIEPAVGPEEEPDVADLGGSPAPAVSSTTESSADE
DEDDDTSSSGDHRGGGGGVMGDLHASSSSFFTSSDSGLPTSVNTSDTPFSFSPVPVHHH
GPPTLLPTSRPTRDLARGRPSFRQYEPLKGRCADSTTFGRPSWAAPCAVYNTAELTRRG
AGVRVVKGSRPGAISGK

FIGURE 33

atggctcaagcttgtctttctctgtcttgggcagattgctttgccgctgtcattaagttgccatgtcccctcgaagaggtgctgagcaacagcc
agttttggcaatactatgttctctgtaaagatccgcttgactggccggccttacaggtcactgagctggctcatggttgggaggtgggtgcgt
actgtgcgtttgctgatgctttgtatttgtacctggtgggcagactagcagacgagtttagtgcgtacttgctgttctttcaactagaaccaggt
gtggaaaatccccatattcatgttgtggcacaggccacccagttgtcggcatttaactggcgtcgcattttaactcaggcatgtcatgacatg
gctctgggggtttttgaaacctgactacttgggctgggctaaaaattgtgtgaatattaaaaaagacaagtctggacgaattttacggtcagac
tggcaatttgtagaaacttacctattgcctaaagttcccctgagtaaggtctggtatgcctggactaacaagcccgaatttgagcccatagct
ctcagtgccgctgcgcgggacaggctgatgagaggcaacgcactttgtaatcagccgggaccggggccgtctttttggagaccgggca
gaaattcagggacctcccattaaaaagactaaggcatcagatgagttttacactctctgtcactggttagctcaagagggaatattaacaga
gcctgcctggagacagagagatttagatggctatgtgcgtatgcacacctctactcaggggaggcagcaggtggtgtctgctcttgccat
ggccaaaaacatcatattggatagcattccaaactctgtgtttgccacaaaggcagaagtggtcacagaactctgttttgaaagtaaccgct
gtgtgaggctcttgagaacacagggctatgacccggtacaatttggctgttgggtgttacggtggctggaccgtaaaacgggcaaaaaaa
atactatttggttttatggggtcgctactactgggcaaactaatctagcaaatgcgattgcccactcacttccatgttatggctgtgtaaactgg
accaatgaaaacttcccctttaatgacgccccgacaaatgtgtattgttttgggacgagggtagagtcacggccaaaattgtggaaagtgt
taaagctgtgttgggaggccaagacatcagagtggatcagaagtgtaaggggagctctttcttaagggctaccccagtcattataacaagt
aatggggacatgaccgttgtgcgagatggaaataccacaaccttcgcccatcgccctgccttaaggaccgcatggtccgcttaaattttg
atgtgaggctcccaaatgactttgggcttatcacccccactgaggttcgcgagtggctgagatactgcaaggaacaaggggacgattatg
agttcccagaccagatgtaccagtttccacgagatgttgtttctgttcctgctcctcctgccttgcctcagccagggccagtcacaaatgccc
cggaagaagagatccttgatctccttacccaaacaaacttcgtcactcaacctgggctctctattgagccggccgttggacctgaagaaga
acctgatgtcgcagatcttggagggtctccagcaccagcagtcagcagcaccacagagtccagtgccgacgaggacgaggacgacga
cacctcctcctctggcgaccacagaggaggaggaggaggggtcatgggagatttacacgcttcttcttcctccttctttacttccagtgact
caggactccccacttccgtcaacaccagcgacacccctttctccttcagccccgtaccagtgcaccaccacggaccccccaacgcttctcc
cgacctcacgcccgacacgcgatctggcccgtgggcgcccgtctttccgccagtacgagccattgaaaggccggtgtgcggactcgac
tacgtttggtcgtccgtcttgggccgccccgtgtgcagtctacaacactgcggagctgactcgtcgtggagcaggtgtccgagttgtgaag
gggtcaagaccaggtgcgatctctggaaagtga

FIGURE 34

MEMFRGVVHVSANFINFVNDNWWCCFYQLEEDDWPRLQGWERLIAHLIVKVAGEFA
VPGGSTLGLQYFLQAEHNHFDEGFHVHVVVGGPFVTPRNVCNIVETGFNKVLRELTEP
TYEVSFKPAISKKGKYARDGFDFVTNYLMPKLYPNVVYSVTNFSEYEYVCNSLAYRR
NMHKKALTNTADEGEGTSTNSEWGPEPKKQKTGTVRGEKFVSLVDSLIERGIFTENK
WKQVDWLKEYACLSGSVAGVHQIKTALTLAISKCNSPEYLCELLTRPSTINFNIKENRI
CKIFLQNDYDPLYAGKVFLAWLGKELGKRNTIWLFGPPTTGKTNIAMSLATAVPSYG
MVNWNNENFPFNDVPHKSIILWDEGLIKSTVVEAAKAILGGQNCRVDQKNKGSVEVQ
GTPVLITSNNDMTRVVSGNTVTLIHQRALKDRMVEFDLTVRCSNALGLIPAEECKQWL
FWSQHTPCDVFSRWKEVCEFVAWKSDRTGICYDFSENEDLPGTQTPLLNSPVTSKTSA
LKKTIAALATAAVGTLQTSLTNNNWESSEDSGSPPRSSTPLASPERGEVPPGQQWELNT
SVNSVNALNWPMYTVDWVWGSKAQRPVCCLEHDTESSVHCSLCLSLEVLPMLIENSI
NQPDVIRCSAHAECTNPFDVLTCKKCRELSALWSFVKYD

FIGURE 35

atggaaatgtttcggggtgttgtacatgtttctgctaactttattaactttgttaacgataattggtggtgttgtttttaccagttagaggaagatga
ctggccgcggctgcaaggctgggaaagacttatagctcacttaattgttaaagtagcaggagaatttgctgttccgggaggcagtacttta
gggctgcaatatttttacaagctgaacataaccactttgatgagggatttcatgtgcatgtagtagttgggggaccgtttgttactcccagga
atgtgtgtaatattgtagaaacaggctttaacaaagttttgagggaacttacagagcctacttatgaggtgtcttttaagcctgccatttctaag
aaaggaaagtatgctagagatggatttgactttgtaacaaactatttaatgccaaaactgtatcctaatgttgtttactctgttacaaatttttcag
agtatgagtatgtatgtaattctttagcttacagaaggaacatgcataaaaaagctttaacaaatactgcagatgaaggtgagggcaccagt
acaaattcagagtggggaccagaaccaaaaaaacagaaaactggtaccgtgcgaggagaaaagtttgttagtttggttgactctttaatag
agcgtggcatatttacagaaaacaagtggaagcaggtagattggcttaaagagtatgcctgtctcagtggaagtgtagcaggagtgcacc
agattaaaacagctttaactttagctatttctaaatgtaattctccagaatatttgtgtgaattgttaactagacccagtactattaattttaacatca
aagaaaacagaatttgtaagatatttttacagaatgattatgatcctctgtatgctggtaaagttttttagcttggcttggtaaagagttgggaa
agcgtaataccatttggctttttggaccgcctactactggtaaaacaaatatagctatgagtcttgccactgcagtacccagttatggtatggtt
aattggaataatgaaaactttccttttaacgatgtgccgcataaatctattattttgtgggatgagggacttattaaaagtactgttgtggaagcc
gcaaaagccattttaggagggcaaaattgcagagtggatcaaaaaaataagggcagtgtagaagttcagggcactcccgttctgatcact
agcaacaatgacatgactcgcgtggtgtcaggcaacactgttacgcttatccatcagagggcgctaaaggatcgcatggttgagtttgact
tgactgtgagatgctctaatgcccttggattaattcccgctgaggaatgtaagcagtggttgttctggtcacagcatactccttgtgatgttttct
caaggtggaaggaagtctgtgagtttgttgcttggaaaagtgacagaacagggatttgctatgacttctcagaaaacgaagatcttccggg
gactcagaccccctctgctgaacagcccagtgacctcgaagacatcagcattgaagaaaacgatagcggcattagcaactgcagcggttg
gaacattacagacctccctcacaaacaacaactgggagtcctctgaggatagcggttccccgccccgcagcagcaccccacttgcatct
cctgagcgaggcgaagttcccccggacagcagtgggaactgaacacctcagtaaactctgtaaatgctttaaactggcctatgtataca
gtggattgggtttggggatctaaggctcaaagacctgtgtgttgcttagagcatgatacagaaagttcagtgcattgttctttgtgcttaagttt
agaggtgttgcctatgttaattgaaaacagtattaaccagcccgatgtaattaggtgctctgctcatgctgagtgtactaatccttttgatgtgct
tacctgtaagaaatgtcgagagctgagtgcactgtggagttttgttaagtatgactga

FIGURE 36

MEMYRGVIQVNANFTDFANDNWWCCFFQLDVDDWPELRGPERLMAHYICKVAALL
DTPSGPFLGCKYFLQVEGNHFDNGFHIHVVIGGPFLTPRNVCSAVEGGFNKVLADFTSP
TITVQFKPAVSKKGKYHRDGFDFVTYYLMPKLYPNVIYSVTNLEEYQYVCNSLCYRRT
MHKRQQPCNGGSVEQSSVSLYSDGEPANKKSKVVTVRGEKFCSLVDSLIERNIFNENK
WKETDFKEYAALSASVAGVHQIKTALTLAVSKCNSPAYLGEILTRPNTINFNIRENRIA
NIFLSNNYCPLYAGKMFLAWVQKQLGKRNTIWLFGPPSTGKTNIAMSLASAVPTYGM
VNWNNENFPFNDVPYKSIILWDEGLIKSTVVEAAKSILGGQPCRVDQKNKGSVEVSGT
PVLITSNSDMTRVVCGNTVTLVHQRALKDRMVRFDLTVRCSNALGLIPADEAKQWLW
WAQNNACDAFTQWHLSSDHVAWKVDRTTLCHDFQSEPEPDSELPSSGESVESFDRSD
LSTSWLDVQDQSSSPENSDVEWDIADLLSNEHWIDDLQEDSCSPPRCSTPVAVAEPVE
VPTGTGGGLKWEKNYSVHDTNELRWPMFSVDWVWGTNVKRPVCCLEHDKEFGVHC
SLCLSLEVLPMLIEKSILVPDTLRCSAHGDCTNPFDVLTCKKCRDLSGLMSFLEHE

FIGURE 37

atggagatgtatagaggagttattcaggtaaatgctaactttactgactttgctaacgataactggtggtgctgctttttcagttagatgtagat
gactggccggagcttagaggacccgagaggcttatggctcactacatttgtaaagtggctgctttactggacacccccctctgggccttttt
gggttgcaagtatttttgcaagtggagggcaaccattttgataatgggtttcacattcatgtggtgattgggggaccatttctaactcctagaa
atgtgtgttctgctgtggaaggggtttaacaaagtgttagcagactttacaagccctactatcactgttcagtttaaacctgctgttagtaaa
aaggggaaatatcatagagatggctttgactttgtaacttactatttaatgccaaaactgtaccctaatgttatttacagtgtaactaacctagaa
gaataccagtatgtatgtaattctctctgttataggagaacaatgcataaaaggcaacaaccatgtaatgggggtctgttgaacagtccagt
gtttctttgtattctgatggagaacctgcaaacaagaaaagcaaggttgtaactgttagaggggagaaattctgctctttggtagattcacttat
agaaagaaatatatttaatgaaaacaaatggaaagaaacagactttaaggagtatgctgccttaagtgcttctgtagcaggagttcaccaaa
ttaaaactgctctcactcttgcagtgtcaaagtgtaactctccagcttatctaggagaaattttaactagacctaacactataaattttaacatta
gagaaaacagaattgctaacatttttttaagtaacaactattgcccctctgtatgctgggaaaatgtttttagcttgggtgcagaaacagcttggt
aaaaggaatactatttggctgtttggtcctcccagtactggtaaaactaacattgcaatgagtttggcctctgctgttccaacatatggcatggt
aaactggaacaatgaaaattttccgtttaatgatgtaccttataaaagcattattttgtgggacgagggactaataaagtccacggttgttgaa
gcagcaaaaagtattttaggaggtcagccatgtagagttgatcagaaaaataagggcagcgtggaagtcagtggcactcctgtgctcatta
ccagcaacagtgacatgactagagtggtgtgcggtaacactgtgacccttgtccatcagcgagctttgaaggatcgccatggttcgatttgat
ctgactgtgagatgctctaatgctctgggattaatccctgctgatgaggccaagcagtggctttggtgggcacagaataacgcgtgtgacg
cctttactcaatggcatctgtctagtgatcacgttgcttggaaagtggaccgtacaacgctgtgtcatgacttccagagcgagccggagcca
gacagcgaactccctagtagcggggagtcagttgagagctttgacagaagcgacctctcaacctcctggcttgacgtccaagatcagtca
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gcatgagtga

FIGURE 38

MDMFRGVIQLTANITDFANDSWWCSFLQLDSDDWPELRGVERLVAIFICKVAAVLDN
PSGTSLGCKYFLQAEGNHYDAGFHVHIVIGGPFINARNVCNAVETTFNKVLGDLTDPS
MSVQFKPAVSKKGEYYRDGFDFVTNYLMPKLYPNVIYSVTNLEEYQYVCNSLCYRKN
MHKQHMVSTVDASSSSFMNDMYEPATKRSKSCTVKGEKFRNLVDSLIERNIFSESKW
KEVDFNEFARLSASVAGVHQIKTAITLAVSKCNSPDYLFQILTRPSTIHFNIKENRIAQIF
LNNNYCPLYAGEVFLFWIQKQLGKRNTVWLYGPPSTGKTNVAMSLASAVPTYGMVN
WNNENFPFNDVPYKSLILWDEGLIKSTVVEAAKSILGGQPCRVDQKNKGSVEVTGTPV
LITSNSDMTRVVWYTVTLVHQRALKDRMVRFDLTVRCSNALGLIPADEAKQWLWWA
QSQPCDAFTQWHQVSEHVAWKADRTGLFHDFSTKPEQESNAKSSGKSNDSFAGSDLA
NLSWLDVEDTSSSSESDLSGDIAELVSNDNWLQSGCPPTRCSTPVTVVEPKQVSPGTGG
GLTKWEKNYSVHQENELAWPMFSVDWVWGSHVKRPVCCVEHDKDLVLPHCNLCLS
LEVLPMLIEKSINVPDTLRCSAHGDCTNPFDVLTCKKCRDLSGLMSFLEHDQ

FIGURE 39

atggacatgttccggggagttattcaactgactgctaacattactgactttgctaacgatagctggtggtgtagctttttgcagttagattcaga
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FIGURE 40

MELFRGVLQVSSNVLDCANDNWWCSLLDLDTSDWEPLTHTNRLMAIYLSSVASKLDF
TGGPLAGCLYFFQVECNKFEEGYHIHVVIGGPGLNPRNLTVCVEGLFNNVLYHLVTEN
VKLKFLPGMTTKGKYFRDGEQFIENYLMKKIPLNVVWCVTNIDGYIDTCISATFRRGA
CHAKKPRITTAINDTSSDAGESSGTGAEVVPINGKGTKASIKFQTMVNWLCENRVFTE
DKWKLVDFNQYTLLSSSHSGSFQIQSALKLAIYKATNLVPTSTFLLHTDFEQVMCIKDN
KIVKLLLCQNYDPLLVGQHVLKWIDKKCGKKNTLWFYGPPSTGKTNLAMAIAKSVPV
YGMVNWNNENFPFNDVAGKSLVVWDEGIIKSTIVEAAKAILGGQPTRVDQKMRGSVA
VPGVPVVITSNGDITFVVSGNTTTTVHAKALKERMVKLNFTVRCSPDMGLLTEADVQ
QWLTWCNAQSWDHYENWAINYTFDFPGINADALHPDLQTTPIVTDTSISSSGGESSEEL
SESSFFNLITPGAWNTETPRSSTPIPGTSSGESFVGSSVSSEVVAASWEEAFYTPLADQFR
ELLVGVDYVWDGVRGLPVCCVQHINNSGGGLGLCPHCINVGAWYNGWKFREFTPDL
VRCSCHVGASNPFSVLTCKKCAYLSGLQSFVDYE

FIGURE 41

atggagctatttagaggggtgcttcaagtttcttctaatgttctggactgtgctaacgataactggtggtgctctttactggatttagacacttct
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FIGURE 42

MELFRGVLQVSSNVLDCANDNWWCSLLDLDTSDWEPLTHTNRLMAIYLSSVASKLDF
TGGPLAGCLYFFQVECNKFEEGYHIHVVIGGPGLNPRNLTMCVEGLFNNVLYHLVTEN
VKLKFLPGMTTKGKYFRDGEQFIENYLIKKIPLNVVWCVTNIDGYIDTCISATFRRGAC
HAKKPRITTAINDTSSDAGESSGTGAEVVPFNGKGTKASIKFQTMVNWLCENRVFTED
KWKLVDFNQYTLLSSSHSGSFQIQSALKLAIYKATNLVPTSTFLLHTDFEQVMCIKDNK
IVKLLLCQNYDPLLVGQHVLKWIDKKCGKKNTLWFYGPPSTGKTNLAMAIAKSVPVY
GMVNWNNENFPFNDVAGKSLVVWDEGIIKSTIVEAAKAILGGQPTRVDQKMRGSVAV
PGVPVVITSNGDITFVVSGNTTTTVHAKALKERMVKLNFTVRCSPDMGLLTEADVQQ
WLTWCNAQSWDHYENWAINYTFDFPGINADALHPDLQTTPIVTDTSISSSGGESSEELS
ESSFLNLITPGAWNTETPRSSTPIPGTSSGESFVGSPVSSEVVAASWEEAFYTPLADQFRE
LLVGVDYVWDGVRGLPVCCVQHINNSGGGLGLCPHCINVGAWYNGWKFREFTPDLV
RCSCHVGASNPFSVLTCKKCAYLSGLQSFVDYE

FIGURE 43

atggagctatttagaggggtgcttcaagtttcttctaatgttctggactgtgctaacgataactggtggtgctctttactggatttagacacttct
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FIGURE 44

MFSIINPSDDFWTKDKYIMLTIKGPVEWEAEIPGISTDFFCKFSNVPVPHFRDMHSPGAP
DIKWITACTKMIDVILNYWNNKTAVPTPAKWYAQAENKAGRPSLTLLIALDGIPTATIG
KHTTEIRGVLIKDFFDGNAPKIDDWCTYAKTKKNGGGTQVFSLSYIPFALLQIIRPQFQ
WAWTNINELGDVCDEIHRKHIISHFNKKPNVKLMLFPKDGTNRISLKSKFLGTIEWLSD
LGIVTEDAWIRRDVRSYMQLLTLTHGDVLIHRALSISKKRIRATRKAIDFIAHIDTDFEIY
ENPVYQLFCLQSFDPILAGTILYQWLSHRRGKKNTVSFIGPPGCGKSMLTGAILENIPLH
GILHGSLNTKNLRAYGQVLVLWWKDISINFENFNIIKSLLGGQKIIFPINENDHVQIGPCP
IIATSCVDIRSMVHSNIHKINLSQRVYNFTFDKVIPRNFPVIQKDDINQFLFWARNRSINC
FIDYTVPKIL

FIGURE 45

atgttttccataataaatccaagtgatgatttttggactaaggacaaatatatcatgttgactatcaaaggccccgtggagtgggaggcagaa
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FIGURE 46

5' – ttggccactccctctctgcgcgctcgctcgctcactgaggccgggcgaccaaaggtcgcccga – 3'

FIGURE 47

5' – ggcggttggggctcggcgctcgctcgctcgctgggcgggcggg – 3'

FIGURE 48

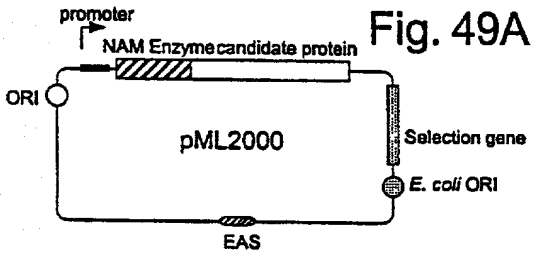


Fig. 49A

pML2000-v.1

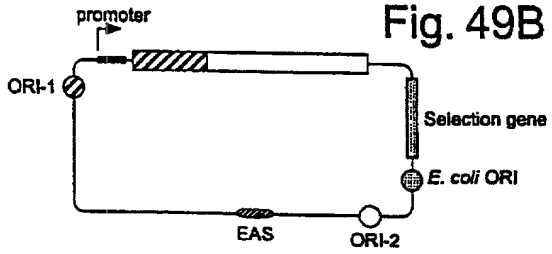


Fig. 49B

pML2000-v.2

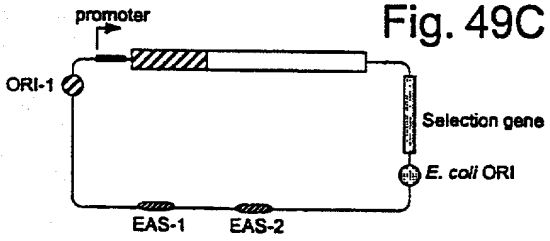


Fig. 49C

pML2000-v.3

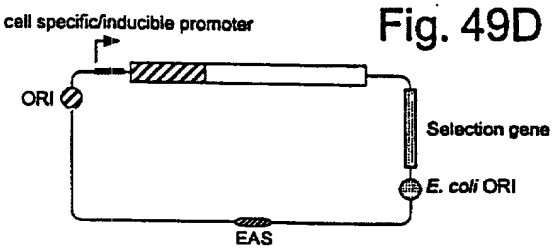


Fig. 49D

pML2000-v.4

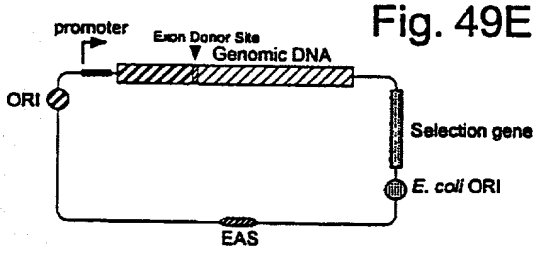


Fig. 49E

pML2000-v.5

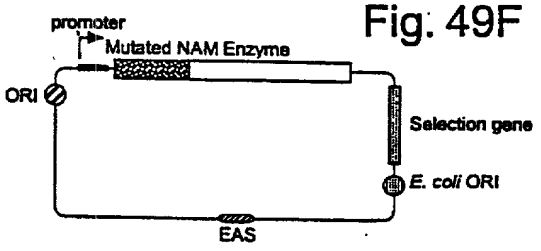


Fig. 49F

pML2000-v.6

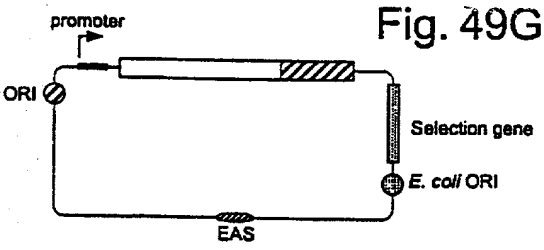


Fig. 49G

pML2000-v.7

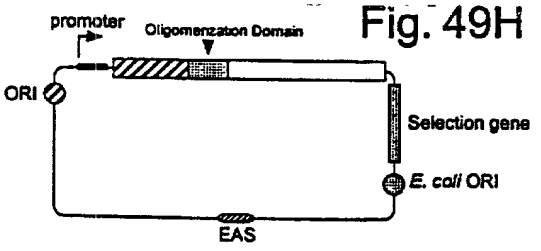


Fig. 49H

pML2000-v.8

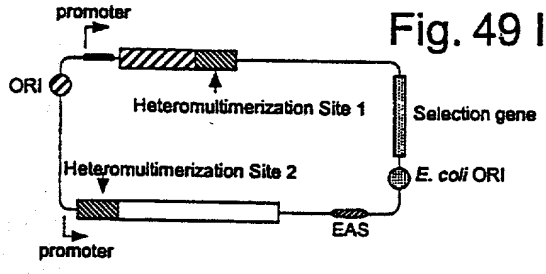


Fig. 49 I

pML2000-v.9

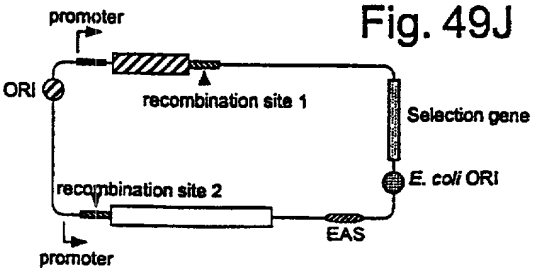
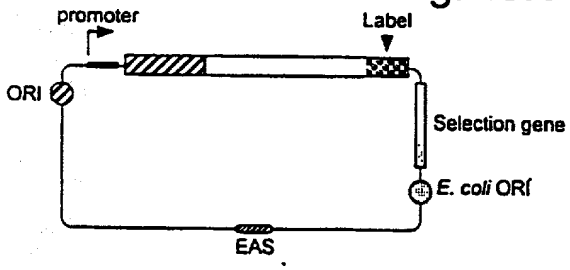


Fig. 49J

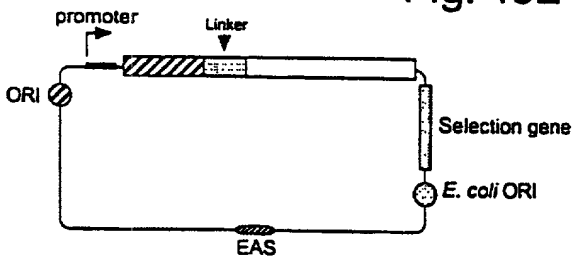
pML2000-v.10

Fig. 49K



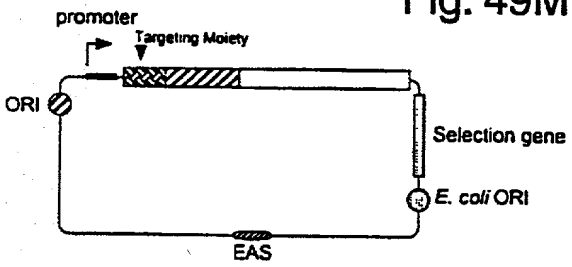
pML2000-v.11

Fig. 49L



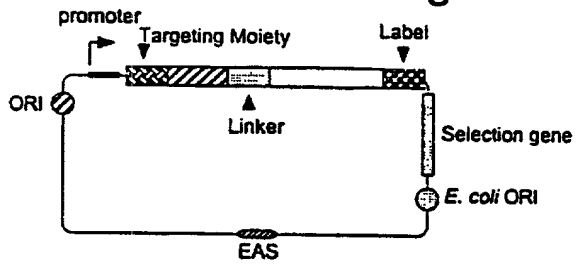
pML2000-v.12

Fig. 49M



pML2000-v.13

Fig. 49N



pML2000-v.14

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